

Please **CANCEL** claim 1.

Please **AMEND** the **CLAIMS** as follows:

1. (Cancelled)

2. (Currently Amended) In a Home Agent supporting Mobile IP, a method of establishing communication between a Mobile Node and a Home Agent, comprising:

receiving a registration request packet from a Mobile Node, the registration request packet including an IP source address and a Home Agent address;

detecting from the registration request packet whether network address translation of the IP source address has been performed; and

when it has been detected that network address translation of the IP source address has been performed, setting up a tunnel between the Home Agent address and the IP source address, wherein the tunnel is not a UDP tunnel;

~~The method as recited in claim 1,~~ wherein the registration request packet further includes a care-of address, and wherein detecting from the registration request packet ~~when~~ whether network address translation has been performed ~~includes~~ comprises:

determining whether the IP source address is equal to the care-of address;

wherein network address translation has been performed when the IP source address is not equal to the care-of address.

3. (Currently Amended) In a Home Agent supporting Mobile IP, a method of establishing communication between a Mobile Node and a Home Agent, comprising:

receiving a registration request packet from a Mobile Node, the registration request packet including an IP source address and a Home Agent address;

detecting from the registration request packet whether network address translation of the IP source address has been performed; and

when it has been detected that network address translation of the IP source address has been performed, setting up a tunnel between the Home Agent address and the IP source address, wherein the tunnel is not a UDP tunnel;

~~The method as recited in claim 1,~~ wherein the registration request packet further includes a direct encapsulation bit and a care-of address, and wherein detecting from the registration request packet ~~when~~ whether network address translation has been performed includes comprises:

determining whether the IP source address is equal to the care-of address; and

determining whether the direct encapsulation bit is set;

wherein network address translation has been performed when the IP source address is not equal to the care-of address and when the direct encapsulation bit is set.

4. (Currently Amended) In a Home Agent supporting Mobile IP, a method of establishing communication between a Mobile Node and a Home Agent, comprising:

receiving a registration request packet from a Mobile Node, the registration request packet including an IP source address and a Home Agent address;

detecting from the registration request packet whether network address translation of the IP source address has been performed; and

when it has been detected that network address translation of the IP source address has been performed, setting up a tunnel between the Home Agent address and the IP source address, wherein the tunnel is not a UDP tunnel;

~~The method as recited in claim 1~~, wherein the registration request packet includes a direct encapsulation bit, the method further including comprising:

determining from the direct encapsulation bit whether the Mobile Node has a collocated care-of address;

wherein setting up a tunnel between the Home Agent address and the IP source address is performed when the Mobile Node has a collocated care-of address.

5. (Currently Amended) In a Home Agent supporting Mobile IP, a method of establishing communication between a Mobile Node and a Home Agent, comprising:

receiving a registration request packet from a Mobile Node, the registration request packet including an IP source address and a Home Agent address;

detecting from the registration request packet whether network address translation of the IP source address has been performed;

when it has been detected that network address translation of the IP source address has been performed, setting up a tunnel between the Home Agent address and the IP source address, wherein the tunnel is not a UDP tunnel; and

~~The method as recited in claim 1, further comprising:~~

determining whether the registration request packet has been received from a Foreign Agent;

wherein setting up a tunnel between the Home Agent address and the IP source address is performed when the registration request packet has not been received from a Foreign Agent.

6. (Currently Amended) In a Home Agent supporting Mobile IP, a method of establishing communication between a Mobile Node and a Home Agent, comprising:

receiving a registration request packet from a Mobile Node, the registration request packet including an IP source address, a Home Agent address, and a care-of address;

detecting from the registration request packet whether network address translation of the IP source address has been performed;

when it has been detected that network address translation of the IP source address has been performed, setting up a tunnel between the Home Agent address and the IP source address, wherein the tunnel is not a UDP tunnel; and

~~The method as recited in claim 1, wherein the registration request packet further includes a care-of address, the method further comprising:~~

when it has been detected that network address translation has not been performed, setting up a tunnel between the Home Agent address and the care-of address.

7. (Currently Amended) The method as recited in claim 6 ~~1~~, ~~wherein the registration request packet further includes a care-of address, and~~ wherein detecting from the registration request packet ~~when~~ whether network address translation has been performed comprises:

determining whether the care-of address is a private address;

wherein network address translation has been performed when the care-of address is a private address.

8. (Currently Amended) In a Home Agent supporting Mobile IP, a method of establishing communication between a Mobile Node and a Home Agent, comprising:

receiving a registration request packet from a Mobile Node, the registration request packet including an IP source address, a Home Agent address, and a care-of address;

detecting from the registration request packet whether network address translation of the IP source address has been performed; and

when it has been detected that network address translation of the IP source address has been performed, setting up a tunnel between the Home Agent address and the IP source address, wherein the tunnel is not a UDP tunnel;

wherein detecting from the registration request packet whether network address translation has been performed includes:

determining whether the care-of address is a private address;

wherein network address translation has been performed when the care-of address is a private address; and

~~The method as recited in claim 7,~~ wherein determining whether the care-of address is a private address includes ~~comprises~~:

determining whether the IP source address is equal to the care-of address;

wherein network address translation has been performed when the IP source address is not equal to the care-of address.

9. (Original) The method as recited in claim 7, wherein the IP source address is a public address.

10. (Currently Amended) The method as recited in claim 7 ~~4~~, further comprising:  
updating a mobility binding table with an entry associating the Mobile Node with the tunnel.

11. (Currently Amended) In a Home Agent supporting Mobile IP, a method of establishing communication between a Mobile Node and a Home Agent, comprising:

receiving a registration request packet from a Mobile Node, the registration request packet including an IP source address and a Home Agent address;

detecting from the registration request packet whether network address translation of the IP source address has been performed;

when it has been detected that network address translation of the IP source address has been performed, setting up a tunnel between the Home Agent address and the IP source address, wherein the tunnel is not a UDP tunnel;

~~The method as recited in claim 1, further comprising;~~

composing a registration reply packet, the registration reply packet including an IP destination address, the IP destination address being equal to the IP source address of the registration request packet; and

sending the registration reply packet to the IP destination address.

12. (Currently Amended) A computer-readable medium storing thereon computer-readable instructions for establishing communication between a Mobile Node and a Home Agent supporting Mobile IP, comprising:

instructions for receiving a registration request packet from a Mobile Node, the registration request packet including an IP source address and a Home Agent address;

instructions for detecting from the registration request packet ~~when~~ whether network address translation of the IP source address has been performed;

instructions for setting up a tunnel between the Home Agent address and the IP source address when it has been detected that network address translation of the IP source address has been performed, wherein the tunnel is not a UDP tunnel.

13. (Currently Amended) A Home Agent supporting Mobile IP, the Home Agent being adapted for establishing communication between a Mobile Node and the Home Agent, comprising:

means for receiving a registration request packet from a Mobile Node, the registration request packet including an IP source address and a Home Agent address;

means for detecting from the registration request packet ~~when~~ whether network address translation of the IP source address has been performed; ~~and~~

means for setting up a tunnel between the Home Agent address and the IP source address when it has been detected that network address translation of the IP source address has been performed, wherein the tunnel is not a UDP tunnel;

means for composing a registration reply packet, the registration reply packet including an IP destination address, the IP destination address being equal to the IP source address of the registration request packet; and

means for sending the registration reply packet to the IP destination address.

14. (Currently Amended) A Home Agent supporting Mobile IP, the Home Agent being adapted for establishing communication between a Mobile Node and the Home Agent, comprising:

a processor; and

a memory, at least one of the processor and the memory being adapted for:

receiving a registration request packet from a Mobile Node, the registration request packet including an IP source address and a Home Agent address;

detecting from the registration request packet ~~when~~ whether network address translation of the IP source address has been performed; ~~and~~

setting up a tunnel between the Home Agent address and the IP source address when it has been detected that network address translation of the IP source address has been performed, wherein the tunnel is not a UDP tunnel;

composing a registration reply packet, the registration reply packet including an IP destination address, the IP destination address being equal to the IP source address of the registration request packet; and

sending the registration reply packet to the IP destination address